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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,421

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Chikuni Kawakami

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EXAMINER

SUTHAR, RISHI S

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/759,421	Applicant(s) KAWAKAMI, CHIKUNI	
	Examiner Rishi Suthar	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Responsive to amendment filed on 6 December 2005.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 and 5 are rejected under 35 U.S.C. 102(b) as being unpatentable by Koay et al. (U.S. Patent Application Publication No. US 2002/0047130 A1).

Regarding claim 1, Koay et al. teaches a lighting apparatus (200) in Fig. 2 comprising a reflecting surface (222) for reflecting light formed on a circuit board (210) (Par. [0031], lines 1-3), an LED light source (230) for emitting illumination light with a light-emitting diode, mounted on a part of said reflecting surface (Par. [0047], lines 1-5), and a reflector (224) for reflecting ahead the light emitted from said LED light source (Par. [0011], lines 1-3) mounted on said circuit board so as to surround said LED light source, and said reflector having an opened rear thereof closed by said reflecting surface when mounted on said circuit board, as shown in Fig. 2.

Regarding claim 2, Koay et al. teaches the reflecting surface can be formed by gold plating (Par. [0011], lines 3-6).

Regarding claim 5, Koay et al. teaches an optical component (dome 260) placed on said reflector for expanding and flooding ahead the light emitted from said LED light source (Par. [0028], lines 8-11).

3. Claims 1, 6 and 10 are rejected under 35 U.S.C. 102(b) as being unpatentable by Reisenauer et al. (U.S. Patent No. 6,161,910).

Regarding claim 1, Reisenauer et al. teaches a lighting apparatus in Fig. 2 and 3 comprising a reflecting surface (24) for reflecting light formed on a circuit board (22); an LED light source (26) for emitting illumination light with a light emitting diode, mounted on part of said reflecting surface; and a reflector (25) for reflecting ahead the light emitted from said LED light source, mounted on said circuit board so as to surround said LED light source, and said reflector having an opened rear thereof closed by said reflecting surface when mounted on said circuit board. It is inherent that the reflector (25) reflects light since all objects reflect some amount of light.

Regarding claim 6, Reisenauer et al. teaches a lighting apparatus (10) in Fig. 3 having an LED light source for emitting illumination light with a light-emitting diode (26); and a reflector (24, 25) in Fig. 1 and Fig 3 (Col. 3, lines 61-63) for reflecting ahead the light emitted from said LED light source, said reflector having an internal reflecting surface that surrounds the rear side and side surface side of said LED light source, wherein said LED light source is placed clear of the internal reflecting surface of said reflector, such that said reflector reflects light emitted from said LED light source in a side direction and in a rear direction of said LED light source, as shown in Fig. 2.

Regarding claim 10, Reisenauer et al. teaches in Fig. 1-2 that said LED light source has a lead terminal put through a hole provided on said reflector and is joined with a predetermined pad of a circuit board (22) so as to mount said LED light source on said circuit board (Col. 3, lines 37-40).

Regarding claim 22, Reisenauer et al. teaches in Fig. 3 that said reflector (24, 25) protrudes from said circuit board when mounted on said circuit board.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koay et al. (U.S. Patent Application Publication No. US 2002/0047130 A1) in view of Kitano et al. (U.S. Patent Application Publication No. US 2003/0216151 A1).

Regarding claim 3, Koay et al. teaches the invention as claimed above. Koay et al. does not teach the said LED light source is a surface-mounted white chip LED and is surface-mounted on said reflecting surface. Kitano et al. teaches a LED light source which can use a white colored chip LED as the light source (Par. [0047], lines 2-4). It would be obvious to one of ordinary skill in the art at the time of applicant's invention to modify the light source of Koay et al. to use a white colored surface-mounted chip LED

as taught by Kitano et al. since a white light can capture a scene's true color when the light source is used as a flash for a camera.

Regarding claim 4, Koay et al. teaches the invention as claimed above. Koay et al. does not teach the LED light source is comprised of three types of LED light sources for emitting red light (22a), green light (23a), and blue light (24a), and the LED light source for emitting the light in each color is radially placed as shown in Fig. 3. It would be obvious to one of ordinary skill in the art at the time of applicant's invention to modify the light source of Koay et al. to use an RGB LED light source as taught by Kitano et al. so as to use the light source to perform multiple functions on a mobile phone, such as illuminating a white flash for a camera, or flash a single color LED as an indication for an incoming call (Kitano et al., Par. [0013, 0014]).

Regarding claim 11 and 12, Koay et al. teaches the lighting apparatus as claimed above. Koay et al. does not teach an electronic flash apparatus of a camera or a camera comprising the lighting apparatus. Kitano et al. teaches an electronic flash of a camera and a camera using an LED light source. It would be obvious to one of ordinary skill in the art at the time of applicant's invention to use the light source of Koay et al. in the electronic flash apparatus and camera of Kitano et al. since the light source of Koay et al. provide a wide viewing angle and thus would be suitable for an electronic flash apparatus of a camera.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reisenauer et al. (U.S. Patent No. 6,161,910) in view of McDermott (U.S. Patent No. 4,947,291).

Reisenauer et al. teaches a lighting apparatus as claimed above. Reisenauer et al. does not teach that the LED light source is comprised of three types of LED light sources for emitting red light, green light, and blue light. McDermott teaches an lighting apparatus where the LED source is comprised of three types of LED sources for emitting red light, green light, and blue light (Col. 4, lines 4-6) light in each color is radially placed as shown in Fig. 10. It would be obvious to one of ordinary skill in the art at the time of applicant's invention to modify the lighting apparatus of Reisenauer et al. to include RGB light sources to provide a white light so as to not impair the sensitivity of the eye's receptors (McDermott, Col. 4, lines 6-10).

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reisenauer et al. (U.S. Patent No. 6,161,910) in view of Sommers (U.S. Patent Application Publication No. US 2003/0180037 A1).

Reisenauer et al. teaches the lighting apparatus as claimed above. Reisenauer et al. does not teach an electronic flash apparatus of a camera or a camera comprising the lighting apparatus. Sommers teaches an electronic flash apparatus (4) of a camera and a camera (1) which uses the flash apparatus in Fig. 1 (Par. [0020]). It would be obvious to one of ordinary skill in the art at the time of applicant's invention to use the lighting apparatus of Reisenauer et al. in the electronic flash apparatus of a camera and

a camera of Sommers since the color temperature of the lighting apparatus Reisenauer et al. is typical for an electronic flash apparatus of a camera.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reisenauer et al. (U.S. Patent No. 6,161,910) in view of Baliozian (U.S. Patent No. 5,161,871).

Reisenauer et al. teaches the invention as claimed above in claim 1. Reisenauer et al. does not expressly disclose that the circuit board defines a mounting hole and the reflector is provided with a claw that engages with a periphery of the mounting hole. Baliozian teaches in Fig. 1 a lighting apparatus where a surface defines a mounting hole (12) and a reflector (6, 8) is provided with a claw (8a) that engages with a periphery (14) of the mounting hole (12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflector taught by Reisenauer et al. and define a mounting hole in the circuit board to mount a reflector provided with a claw since this type of mounting style allows one to easily and quickly assemble and disassemble the lighting apparatus (Baliozian, col. 1, lines 53-60).

Response to Arguments

Applicant's arguments filed 6 December 2005 have been fully considered but they are not persuasive.

As to claim 1, Applicant argues that the curved side wall (224) of Koay et al. is not mounted on the circuit board since the curved sidewall is the same as the circuit

board. The reflector in the invention of Koay et al. is placed on top of the curved side wall (224) of Koay et al. (p.1, paragraph [0011]). The reflector and the curved side wall are two separate, but joined entities; therefore, the reflector is mounted on the circuit board. Further, Applicant argues that the curved sidewall (224) does not have an opened rear thereof closed by the reflecting surface (222). In Figure 2, it can be seen that the curved side wall (224) ends at the point that the bottom reflecting surface (222) begins. When the reflector (plating) is placed on the circuit board, the bottom portion of the reflector on sidewall (224) is thus closed off by the bottom reflecting surface (222).

As to claim 6, Applicant argues that the inner surface of the external cylinder (25) of Reisenauer is not an internal reflective surface. All materials have light reflecting properties, so it is inherent that the inner surface of the external cylinder (25) is a reflecting surface. Further, due to the design of Reisenauer's invention, the inner surface of the external cylinder (25) must reflect some light in order for the reading lamp to function properly. Therefore, Reisenauer et al. teaches the reflector in claim 6.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Telephone Numbers

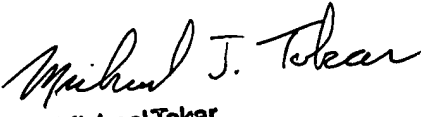
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rishi Suthar whose telephone number is 571-272-8456. The examiner can normally be reached on M-F 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rishi Suthar
Examiner
Art Unit 2851

RS


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